We claim:

1. A method for electrochemically treating a plurality of tubings using at least two electrochemical processes that employ a first electrode and a second electrode for each tubing, each of the processes having a steady-state operative condition, comprising:

disposing an array of dedicated cells which includes an array of electrochemical processing cells in proximity one to the other such that the closeness between cells enables relative movement of each tubing in sequential fashion from dedicated cell to dedicated cell, each electrochemical processing cell being dedicated to performing an associated electrochemical process step and each electrochemical processing cell having the first electrode which bounds at least a portion of an electrode chamber for use in carrying out the electrochemical process;

moving the plurality of tubings relative to the array of dedicated cells such that each tubing moves in sequential fashion through the array of dedicated cells and each tubing is disposed one after the other in the electrode chamber of said electrochemical processing cell to form the second electrode;

disposing a volume of electrolytic fluid in the electrode chamber of each cell for performing one of said electrochemical process steps by flowing electrolytic fluid through the electrochemical cell, the flowrate of electrolytic fluid being flowed to the cell at any given time during the steady-state operative condition of the flow being about equal to the flowrate of electrolytic fluid being flowed through the electrode chamber at said given time for carrying out said associated electrochemical process step on a single tubing.

2. The method for electrochemically treating a plurality of tubings of claim 1 wherein the dedicated cells include a rinsing cell and wherein the method includes the step of disposing the rinsing cell next to one of said electrochemical processing cells, the rinsing cell being dedicated to processing a single tubing at any given time and wherein the method includes the step of disposing a tubing in the rinsing cell after said electrochemical processing cell and includes the process step of flowing a predetermined volume of rinse fluid under pressure through the rinsing cell for each tubing processed, and directing the predetermined volume of rinse fluid against the

tubing to provid impingement cleaning of the tubing and includes moving each of the tubings to on of said adjacent dedicated cells which is associated with the next process step to be performed on the tubing.

3. The method for electrochemically treating a plurality of tubings of claim 2 wherein the step of moving each of said tubings is performed prior to complete drying of the fluid on the tubing.

4. The method for electrochemically treating a plurality of tubings of claim 2 wherein the step of disposing a volume of rinse fluid in the rinse chamber includes flowing a volume of rinse fluid for performing the process step to the rinse chamber, through the rinse chamber, and from the rinse chamber of said dedicated electrochemical processing cell.

5. The method for electrochemically treating a plurality of tubings of claim 2 wherein the tubing has a hydraulic diameter D and wherein the step of disposing the tubing in the electrode includes forming an annular gap G between the tubing and the first electrode which is smaller than said hydraulic diameter D, and includes passing electrolytic fluid through said gap G.

6. The method for electrochemically treating a plurality of tubings of claim 1 wherein the step of moving the plurality of tubings includes moving an array of tubings sequentially through the dedicated cells such that a single tubing is at each cell as the process steps are being performed, wherein each process step is performed for an associated duration of time, wherein the step of moving the plurality of tubings includes determining the longest duration of time for carrying out each process step and wherein the duration of time that a particular tubing remains at any dedicated cell is not less than the longest duration of time at that one dedicated cell requiring the longest duration of time for carrying out the process before moving the tubings to the next cell.

7. The method for electrochemically treating a plurality of tubings of claim 1 wherein the step of moving the tubing includes indexing the tubings of the array of tubings, each to an associated dedicated cell; moving the array of tubings with respect to the array of dedicated cells, each into an associated dedicated cell; performing the process step at the dedicated cell; removing the array of tubings from

th dedicat d cells; and, r indexing the tubings with respect the cells by moving th array of tubings together, each to the next dedicated cell, and further includes removing from th array of tubings, th tubing which has completed th last process step and adding a tubing to the array for beginning the method of treating said added tubing.

8. The method for electrochemically treating a plurality of tubings of claim 7 wherein the step of moving the plurality of tubings includes moving an array of tubings sequentially through the dedicated cells such that a single tubing is at each cell as the process steps are being performed, wherein each process step is performed for an associated duration of time, wherein the step of moving the plurality of tubings includes determining the longest duration of time for carrying out each process step and wherein the duration of time that a particular tubing remains at any dedicated cell is not less than the longest duration of time at that one dedicated cell requiring the longest duration of time for carrying out the process before moving the tubings to the next cell.

9. The method for electrochemically treating a plurality of tubings of claim 7 wherein the step of moving the tubing in sequential fashion through dedicated cells includes moving the tubing through dedicated cells for sequentially performing the steps of electrochemical cleaning using an electrolytic fluid, rinsing using water, electrochemical etching using an electrolytic fluid, rinsing using water; electrochemical activating using an electrolytic fluid; electroplating using an electrolytic electroplating fluid, and, rinsing using water.

10. The method of electrochemically treating a plurality of tubings of claim 9 wherein the method includes providing an electrochemical cleaning solution that is a base; providing an etching solution that is an acid ; providing an activating solution that is sulfuric acid and ammonium sulfate; and providing an electroplating solution that is a nickel plate solution.

11. The method for electrochemically treating a plurality of tubings of claim 6 wherein the step of determining the longest duration of time at each dedicated cell includes using a data processing device to determine the duration of time that a tubing spends at a dedicated cell, and further includes determining the amp-hours

consumed , th volume of rinsing fluid consumed b tween dedicated lectrochemical cells; and determining th dedicated cell and tubing r quiring th longest tim and turning off th flow of fluid and current to the other cells as appropriate once the process step being performed at a dedicated cell is complete.

12. A method for electrochemically plating a plurality of articles using electrochemical processes for the article which requires at least two preparatory process steps and a plating process step, comprising:

providing a plurality of cells, each electrochemical cell being dedicated to and containing during a step the necessary solutions for carrying out the step in the plating process, each electrochemical cell having a first electrode and a second electrode formed by the article, wherein the first electrode is circumferentially disposed about the article and has an interior having a size for receiving the article and a volume of fluid connected with that step which is appropriate for carrying out the process step on a single article at that cell; flowing a volume of fluid connected with that step which is appropriate for carrying out the process step on a single article at that cell; and

moving the article relative to the cells such that a single article moves in sequential fashion through the dedicated cells.

13. A rinsing cell for rinsing electrolyte from the end of a tubing, the tubing being disposed in the rinsing cell under an operative condition, which comprises:

a housing having a rinse chamber disposed about an axis R, the housing having an opening for receiving the tubing and having a bottom surface which faces in the axial direction which bounds the rinse chamber, the rinse chamber having a bottom adjacent the bottom surface;

a guide member extending axially from the bottom of the chamber toward the opening;

a first conduit for supplying rinse fluid to the rinse chamber under operative conditions;

a second conduit for removing rinse fluid from the rinse chamber under operative conditions;

wherein the housing has a plurality of passages disposed circumferentially about th guide member and directed toward the chamber; wherein at least one of said passages is in flow communication with said first conduit for dir cting rinse fluid toward the tubing under said operative condition.

14. The rinsing cell of claim 13 wherein the housing has a circumferential manifold which is in flow communication with said first conduit and in flow communication with said plurality of passages for supplying rinse fluid to the plurality of passages.

15. The rinsing cell of claim 13 wherein said axis R extends vertically and wherein at least one on said impingement passages is angled with respect to the axis R and in a generally downward direction toward the bottom of the rinse chamber.

16. The rinsing cell of claim 13 wherein the tubing has an inner surface which extends circumferentially about the tubing and wherein the guide member is adapted to extend into the tubing under said operative condition and has an axially extending passage which extends from the bottom of the chamber and has a plurality of impingement passages directed toward the inner surface of the tubing under said operative condition for impinging rinse fluid on the inner surface of the tubing.

17. The rinsing cell of claim 16 wherein guide member has a base adjacent to bottom of the chamber and wherein the base has a plurality of axially extending slots which are circumferentially spaced one from the other.

18. The rinsing cell of claim 13 wherein wherein the cell has an opening for receiving said tubing under said operative condition and wherein the opening guides said tubing as the tubing is disposed in the rinsing cell.

19. A method of rinsing a tubing for removing unwanted material including contaminants, from the surface of the tubing, comprising:

disposing a rinsing cell in flow communication with a conduit for supplying rinsing fluid to the rinsing cell, the rinsing cell having a rinse chamber having a center which includes passages directed toward the center of the chamber and further includes a locating pin extending longitudinally in the center of the chamber about an axis R;

disposing th tubing in the rinsing cell which further includes th st ps of moving the tubing relative to the cylindrical chamber and further includes sliding the tubing over th locating pin through relative movement between th pin and the tubing;

flowing rinse fluid axially through the pin and radially outward through the pin such that the fluid impinges on the interior of the tubing while simultaneously flowing fluid through the passages in the wall that are directed toward the tubing disposed in the center of the chamber and flowing at least a portion of the used rinse fluid from the cylindrical chamber.

20. The method of rinsing a tubing of claim 19 wherein the step of flowing a rinse solution includes the steps of detecting the presence of the tubing in the chamber; flowing a predetermined amount of rinse solution to the chamber prior to flowing the rinse solution through the pin and through the walls the chamber.

21. The method of rinsing a tubing of claim 19 wherein the step of flowing rinse fluid through the passages under pressure includes flowing the rinse fluid through the passages under pressure which is greater than ten pounds per square inch gauge.